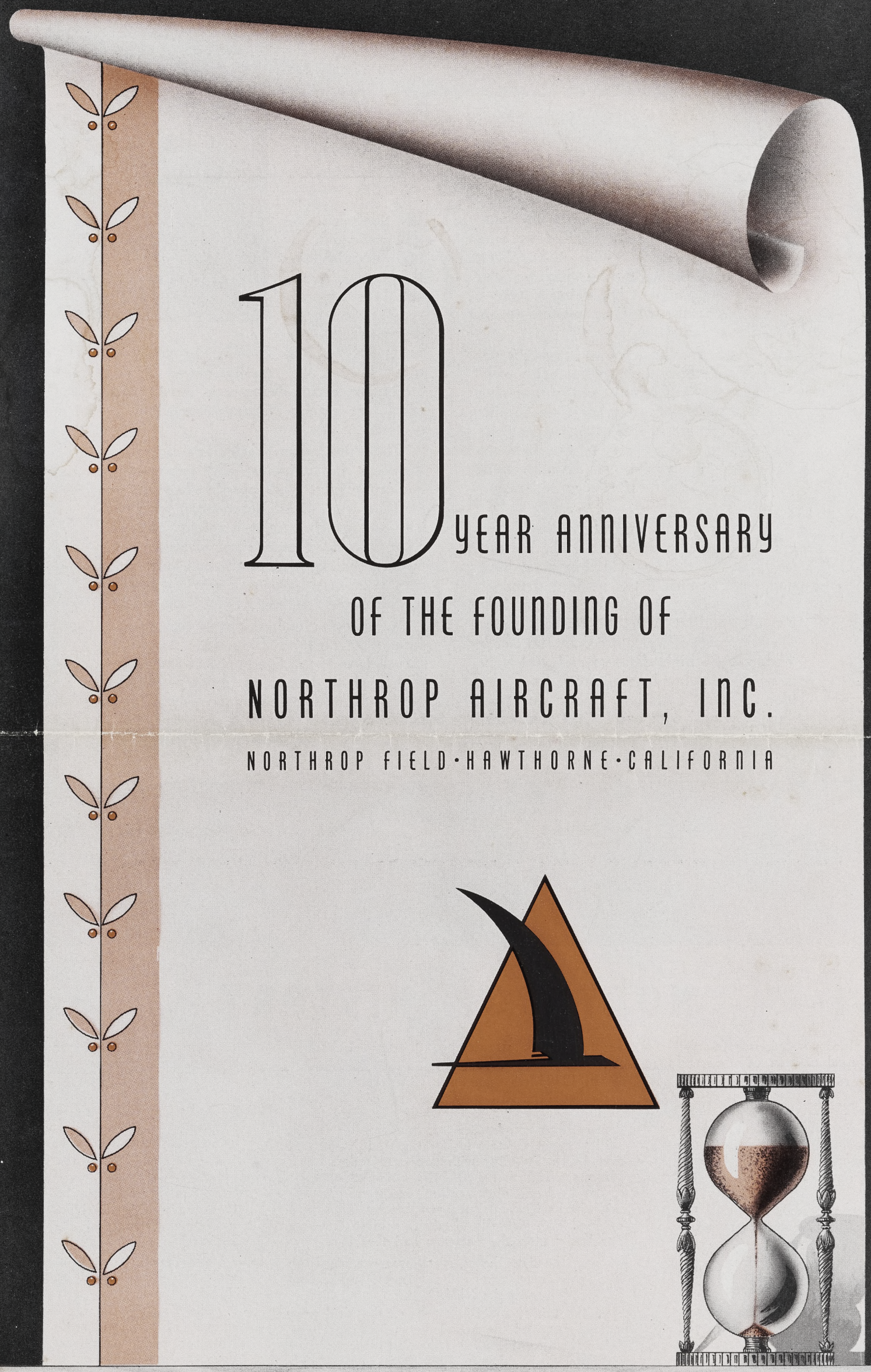


10 YEAR ANNIVERSARY

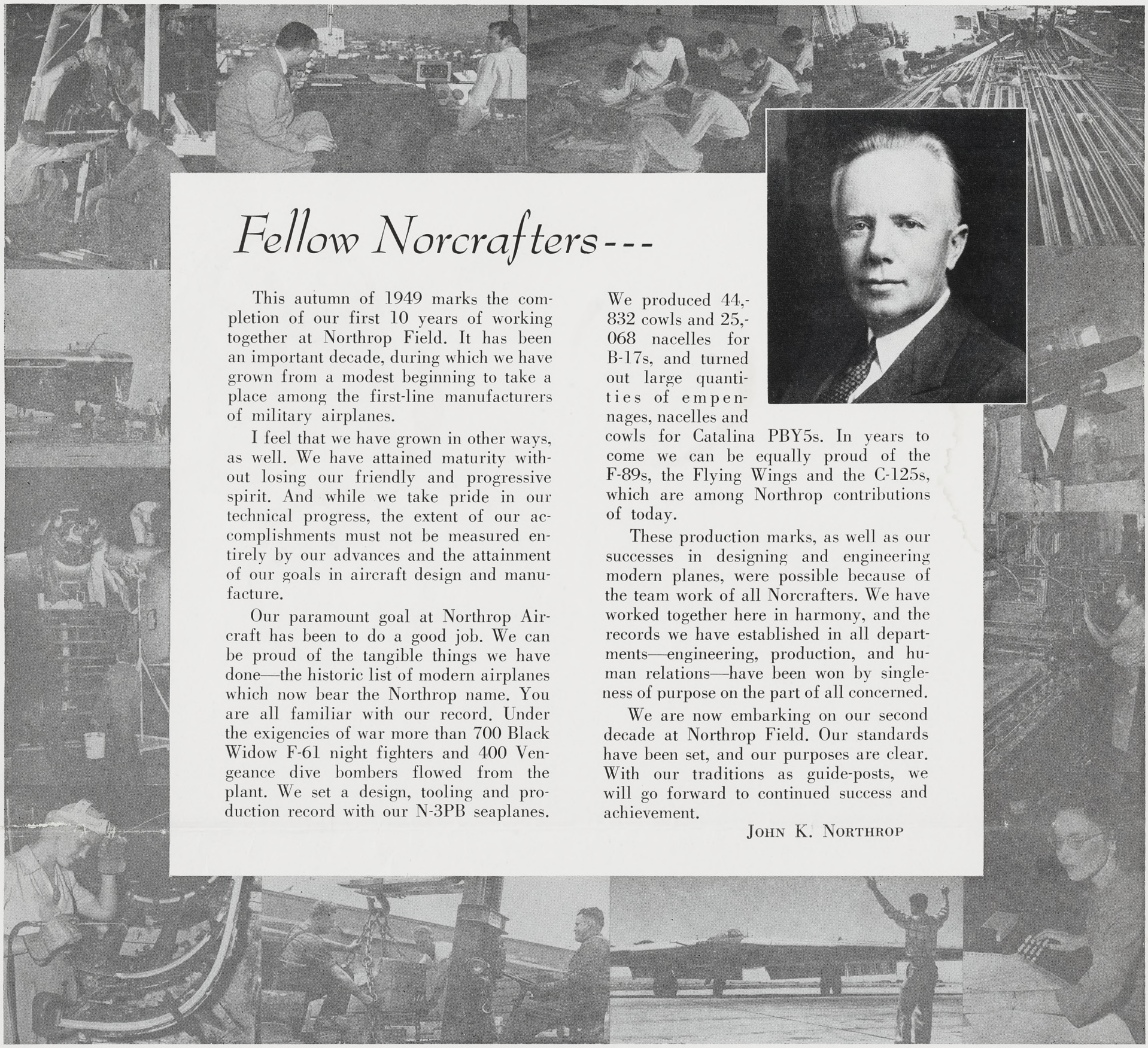
OF THE FOUNDING OF

NORTHROP AIRCRAFT, INC.

NORTHROP FIELD · HAWTHORNE · CALIFORNIA

SOUVENIR ISSUE *Northrop News*

OCTOBER 5, 1949



Fellow Norcrafters---

This autumn of 1949 marks the completion of our first 10 years of working together at Northrop Field. It has been an important decade, during which we have grown from a modest beginning to take a place among the first-line manufacturers of military airplanes.

I feel that we have grown in other ways, as well. We have attained maturity without losing our friendly and progressive spirit. And while we take pride in our technical progress, the extent of our accomplishments must not be measured entirely by our advances and the attainment of our goals in aircraft design and manufacture.

Our paramount goal at Northrop Aircraft has been to do a good job. We can be proud of the tangible things we have done—the historic list of modern airplanes which now bear the Northrop name. You are all familiar with our record. Under the exigencies of war more than 700 Black Widow F-61 night fighters and 400 Vengeance dive bombers flowed from the plant. We set a design, tooling and production record with our N-3PB seaplanes. We produced 44,-832 cowls and 25,-068 nacelles for B-17s, and turned out large quantities of empennages, nacelles and cowls for Catalina PBY5s. In years to come we can be equally proud of the F-89s, the Flying Wings and the C-125s, which are among Northrop contributions of today.

These production marks, as well as our successes in designing and engineering modern planes, were possible because of the team work of all Norcrafters. We have worked together here in harmony, and the records we have established in all departments—engineering, production, and human relations—have been won by singleness of purpose on the part of all concerned.

We are now embarking on our second decade at Northrop Field. Our standards have been set, and our purposes are clear. With our traditions as guide-posts, we will go forward to continued success and achievement.

JOHN K. NORTHROP

-:- NORTHROP HISTORY -:-

Northrop Aircraft, Incorporated, was founded in March, 1939. Composed of men of wide and varied aircraft engineering and production experience, the new company was headed by the man whose name it bears—John K. Northrop.

The beginnings were quite practical and inauspicious. The original and present factory site was acquired in Hawthorne, California, between Prairie and Crenshaw Boulevards, bordering the north side of Broadway.

While the new factory was being built, the Hawthorne hotel was leased as a temporary office building.

Some fifty new "Norcrafters"—nearly all of whom had worked with Mr. Northrop on other projects—came in to head up the new organization.

Among the first of these were Claude Monson, B. G. Reed, Walt J. Cerny, and Thomas H. Quayle. Early in the life of the new company, George Gore also joined the management team.

In August, 1939, Mr. Northrop launched the project to build the world's first all-wing airplane. Cerny, an astute engineer who had been associated with Northrop for many years, was made supervisor of the project.

Around the first of April, 1940, the company had a $2,500,000 backlog, 150 employees and a new factory. Included in this backlog were an empennage, engine cowlings, and seats sub-contract for the Navy PBY-5, and a contract from the Norwegian government for 24 patrol bombers of the seaplane type which were to become known as the N-3PB, an airplane that still holds the record as the world's fastest military seaplane.

In 1942, less than three years after the company had been formed, the Army paid Northrop a high compliment. It awarded the company a contract for production of hundreds of Black Widow night fighters before the first XF-61 had ever flown. Bristling with guns and radar, Black Widows rolled off the production line at Northrop to track down night-raiding enemy aircraft in both the Pacific and European theaters. They were credited with virtually eliminating night bombing attacks by both the Germans and the Japs.

From the date the company was organized the Flying Wing program did not languish. The first Flying Wing was the N1M.

Wind tunnel and flight tests on the N1M were carried out, and the knowledge gained was helpful to Northrop in building the first all-magnesium airplane, the XF-56, in 1943. This small Flying Wing combined the all-wing principle with Heliarc welding, a Northrop development which enabled magnesium to be welded by use of a helium-shielded arc. Following the XF-56, Northrop developed the MX-324, a prone cockpit Flying Wing with remarkable performance characteristics, and the XF-79, another prone cockpit Wing powered by two jet engines. This airplane, which was intended for combat as a "flying ram," never saw production because of the war's end. Its pilot, lying prone in order to withstand extreme shocks and loads, would have been able to send the XF-79 swooping down on enemy bombers, slicing off their tail assemblies with the rugged, hatchet-like wings. Another interesting Flying Wing was the JB-1-A, the first United States buzz bomb. Powered by pulse-jet engines, similar to those used in the German V-1 buzz bombs, the JB-1-A proved an effective experimental weapon. Like the XF-79, it was not put into production because the war's end discounted its usefulness.

While experimentation went forward with these early Flying Wings, Northrop prepared a preliminary design of the huge, 100-ton XB-35 Flying Wing.

To provide flight research data, four 60-foot scale models were built and designated the N9M series.

The first XB-35 was completed in the early summer of 1946 and made its initial flight from Northrop Field, Hawthorne, to Muroc Air Force Base on June 25, 1946. Northrop test flight specialists, Max Stanley, pilot; Fred Bretcher, co-pilot; and Orva H. Douglas, flight engineer, manned the giant, chevron-shaped craft on its maiden flight.

At Muroc, the XB-35 was flown through a series of gruelling tests to prove the efficiency of the Flying Wing design. These tests demonstrated that Flying Wing airplanes, free of the drag-producing fuselage, tail and protruding engine nacelles, are capable of flying farther, faster and carrying heavier loads than equivalent-sized airplanes of conventional design.

The jet-propelled versions, designated the YB-49s, were destined to become the most powerful airplanes the world has ever known. Air Force approved Northrop design for propelling the giant wings with turbojet engines called for eight, 4000-pound-thrust General Electric-designed, Allison-built TG-180 (J-35) engines to be installed in each airplane. Arranged in banks of four in each wing, these engines provided each YB-49 with a potential 32,000 horsepower.

The first YB-49 was lifted off the runway at Northrop Field on October 21, 1947, by the same test crew—Stanley, Bretcher and Douglas—that had flown the previous Flying Wing B-35s.

During the months that followed, the YB-49 thrilled thousands at the nation's capital in February, 1949, when it raced across the continent at an average speed of 511.2 miles per hour. The flight established a new record for very heavy aircraft for the course between Muroc Air Force Base, California, and Washington, D. C.

As Northrop swung into its peacetime operations, development of a three-engined transport was begun. This plane, utilizing a high-lift wing and full-span flaps, proved capable of operating from extremely short fields. Landing and takeoff runs in as little as 500 feet have been recorded.

The Air Force's first orders in March of 1948 were for twenty-three of a version known as the Northrop Raider. These airplanes are now rolling down Plant One's final assembly line.

Two new military airplanes built by Northrop have won wide recognition. One is the Northrop Scorpion XF-89, a twin-jet all-weather fighter hailed as the logical successor to the famous Black Widow. They are now in production.

The other new planes are the Northrop X-4s, semi-tailless research planes built to explore aerodynamic characteristics at high sub-sonic speeds.

Aside from its accomplishments in the development and production of military aircraft, Northrop has won wide recognition for its Industrial Relations program.

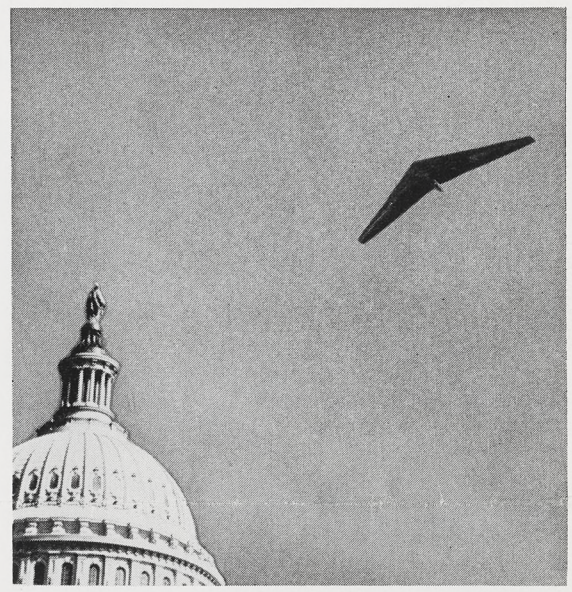
Based on policies established by the founders of the Company, Northrop has become known throughout the United States as a "good place to work." Important phases are modern up-to-the-minute personnel department procedures, adequate insurance, safety, and veterans' provisions, and the Personnel Activities department which provides employees an opportunity to enjoy their favorite sports and hobbies with their fellow Norcrafters.

During this first ten years of existence, Northrop Aircraft and its people have established many records in their field of endeavor and have received many awards and recognitions for their efforts. These are recounted in detail in the adjoining pages.

Highlights and Headlines

AUGUST 10, 1939 Engineers occupy hotel in Hawthorne.
SEPTEMBER 29, 1939 Ground breaking.
JANUARY 31, 1940 Moved to main factory, area 122,500 square feet.
FEBRUARY 22, 1940 Received contract on C. A. C. Empennage and Cowling.
MARCH 12, 1940 Received N-3PB contract.
JULY 3, 1940 Flight of N1M, first Flying Wing.
SEPTEMBER 19, 1940 Received British contract to build V-72 Vengeance dive bomber.
NOVEMBER 19, 1940 Received contract to build Boeing nacelles.
DECEMBER 22, 1940 First flight of N-3PB.
JANUARY 30, 1941 Received Air Force contract on XF-61.
JUNE 18, 1941 Heliarc welding perfected.
NOVEMBER 22, 1941 Received Air Force contract to build XB-35s.
MAY 21, 1942 First flight of XF-61.
FEBRUARY, 1943 Occupied Plant Two.
MAY 18, 1943 First flight of N9M.
JULY 10, 1943 Occupied Plant Three.
AUGUST 27, 1943 Flight of Project 12 Glider.
SEPTEMBER 6, 1943 Flight of XF-56—Roach Drylake. (First welded, magnesium airframe.)
APRIL 3, 1944 Formation of Northrop-Hendy.
JULY, 1944 Peak employment—10,009 people.
JULY 5, 1944 Flight of rocket Glider.
OCTOBER 12, 1944 Northrop JB-10 jet buzz bomb flew, beginning Northrop research in missile field—Eglin Field, Florida.
MARCH 10, 1945 First gas Turbodyne engine operated on its own power.
JUNE 22, 1945 Received Air Force contract to build YB-49.
JULY 2, 1945 First flight of F-15.
SEPTEMBER 12, 1946 First flight of XP-79.
MARCH, 1946 Northrop Aeronautical Institute occupied new facilities.
JUNE 25, 1946 Flight of XB-35—Northrop Field.
DECEMBER 21, 1946 Flight of N-23.
OCTOBER 21, 1947 Flight of YB-49.
MARCH 8, 1948 Received Air Force contract to build YC-125.
JUNE 16, 1948 The Turbodyne Corporation replaces Northrop-Hendy Company under full Northrop ownership.
AUGUST 16, 1948 First flight of XF-89.
JULY, 1949 Occupied Lynwood warehouse—total floor space—over one million square feet.
AUGUST 1, 1949 Flight of YC-125.

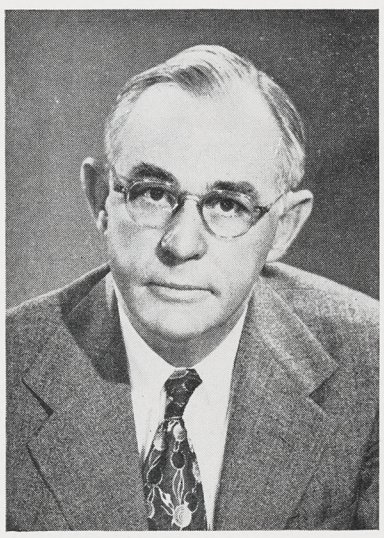
GROUND BREAKING —. Sheriff Eugene Biscailuz, Hawthorne Mayor Fred Hauser, and Los Angeles Mayor Fletcher Bowron observe as Jack Northrop turns first shovel of sod—historic date—September 29, 1939.



TEN YEARS LATER—. In February, 1949, Northrop Flying Wing 8-jet bomber circles Capitol dome after 511.2 mph Muroc-Washington record for very heavy airplane run.

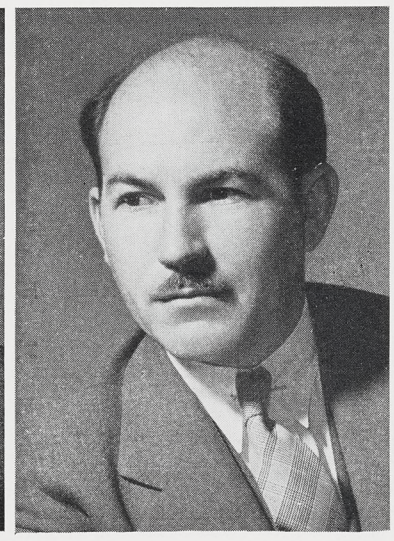
READY FOR OCCUPANCY—January 31, 1940—the first Northrop factory, now known as Plant One, totaled 122,500 square feet. There were 109 new "Norcrafters." Two years later the factory had grown to 550,000 square feet and employment by mid-summer 1942 numbered 8200 persons. Since the time of inset photo, 1940, the Company has grown to extend throughout entire length of the mile-long flight field. The Crenshaw "bomber" plant has been added—likewise the Broadway "inner wing" plant, Northrop Aeronautical Institute, and The Turbodyne Corporation. Factory floor space, including Lynwood warehouse, now totals 1,380,664 square feet.

Northrop DIRECTORS, OFFICERS AND ADMINISTRATIVE PERSONNEL

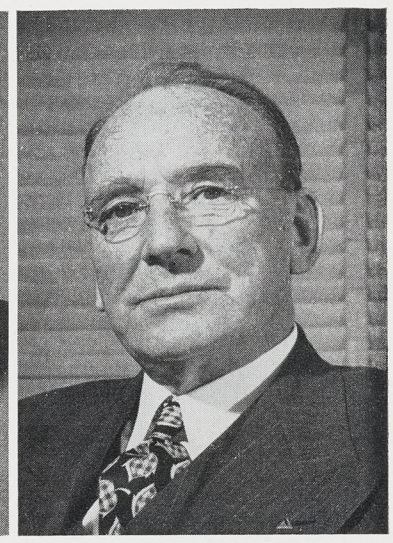


OLIVER P. ECHOLS
Chairman of the Board
and General Manager

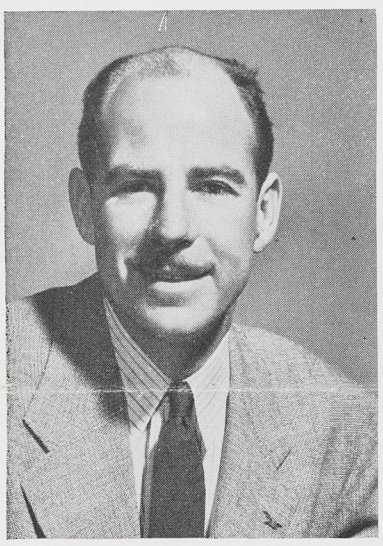
JOHN K. NORTHROP
President
Director



C. N. MONSON
Director
Executive Vice-President

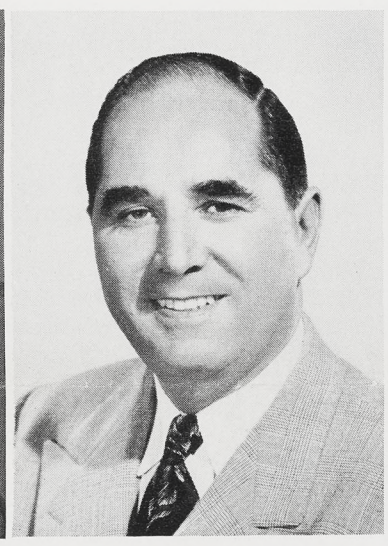


ROLAND J. PAGEN
Director
Treasurer and Controller



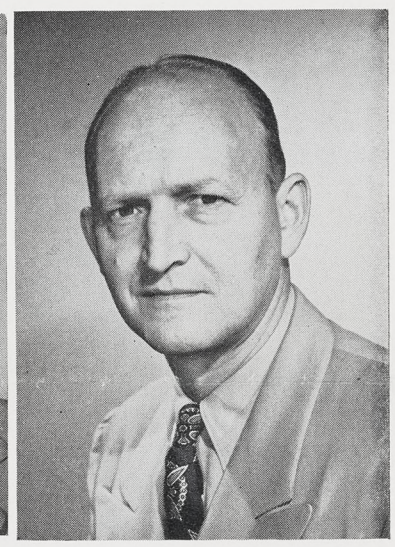
JOHN W. MYERS
Vice-President
Director of Sales

B. G. REED
Vice-President
In Charge of Production



KENNETH P. BOWEN
Assistant Vice-President
Production

GEORGE GORE
Secretary
Corporation Counsel



L. F. HARMAN
Assistant Secretary
Chief Management Control

MANAGEMENT CONTROL

L. F. HARMAN, Chief, Management Control
WARREN G. KNIERIEM, Schedule Administrator

ADMINISTRATIVE PLANNING DIVISION

J. G. MacDONNELL, Administrative Officer

ENGINEERING DIVISION

WALTER J. CERNY, Director, Engineering
C. L. BATES, Design Adminstrator and Chief of Flight Test
E. P. HETZEL, Assistant Chief of Flight Test
J. A. VARNEY, Staff Assistant and CAA Liaison
H. E. METCALF, Chief of Nuclear Energy Research and Patent Counsel
LEO A. OHLINGER, Project Engineer, Project 29
A. J. PHELAN, Chief of Power Plant Research
I. L. ASHKENAS, Chief of Aerodynamics
R. A. DUTTON, Engineering Manager
A. M. SCHWARTZ, Chief of Structures
P. K. ROSS, Assistant Chief of Structures
C. R. MOORE, Project Engineer, B-35 and B-49
S. F. ERBECK, Project Staff Engineer, B-35 and B-49
FRED J. BAUM, Project Engineer, C-125
WILLARD CLAY, Project Engineer, F-89
S. E. WEAVER, Project Executive Engineer, Project MX 775
F. C. BELL, Project Engineer, Project 25
A. I. LUSK, Project Engineer, Project N-25A and Project 26
E. C. DENZIN, Project Engineer, Project 27 and Project 58
MEYER FISHBEIN, Project Engineer, Preliminary Design
E. A. GARDNER, Test Administrator
THOMAS E. PIPER, Chief Process Engineer

FINANCE DIVISION

ROLAND J. PAGEN, Member Board of Directors, Treasurer and Controller
CHARLES CILLEY, Executive Assistant and Credits and Collections
GEORGE T. JOHNSON, Assistant Controller

INDUSTRIAL RELATIONS DIVISION

JOHN B. CLARK, Director
R. G. McGUIRE, Assistant Director

INSPECTION DIVISION

R. S. CATLIN, Chief Inspector
R. G. HENDRICKS, Assistant to Chief Inspector
JACK MANNION, Assistant Chief Inspector
R. W. ROBINSON, Coordinator
JON RICE, Inspection Test Coordinator

MANUFACTURING DIVISION

C. B. SPENCER, Factory Manager
W. C. HALL, Staff Assistant
GEORGE F. WEST, Superintendent, Production
MAL MOUNTAIN, Staff Assistant
JOHN S. BRENEMAN, Superintendent, Production (Nights)
CHARLES ZELLER, Assistant Superintendent, Production (Nights)
D. W. KRAYBILL, Project Foreman N-25A
DON W. PHILLIPS, Project Foreman YC-125
A. R. CARR, Assistant Superintendent, Crenshaw Plant
FRANK LLOYD, Project Foreman Conversion YB-35
PAUL JACOBS, Assistant Superintendent, YF-89A and F-89A
A. W. MORGAN, Project Foreman, YF-89A and F-89A
CARL HOFFMAN, Assistant Superintendent, Flight Operations
JOHN FOOTE, Assistant Superintendent, Sub-Assembly and Fabrication
D. G. LELAND, Superintendent, Production Engineering
G. F. GERHAUSER, Assistant Superintendent, Production Engineering
J. S. BECHDOLT, Chief Project Tool Engineer
DOUGLAS HUGILL, Tool Project Engineer, F-89A
R. A. BOHLING, Tool Project Engineer, Project 25 and Project 26
JACK KAHLO, Tool Project Engineer, C-125
ROBERT LIEBER, Assistant Superintendent, Production Engineering
C. W. DRURY, Assistant Superintendent, Production Engineering
GORDON GRIMM, Night Foreman, Production Engineering
A. F. THOMPSON, Superintendent, Manufacturing Control
R. C. SHAFER, Staff Assistant
JACK HAYNES, Assistant Superintendent, Manufacturing Control

MATERIEL DIVISION

CONRAD KUNZE, Superintendent
MARVIN GAUT, Traffic Manager
J. H. CAMPBELL, Purchasing Agent

NORTHROP AERONAUTICAL INSTITUTE

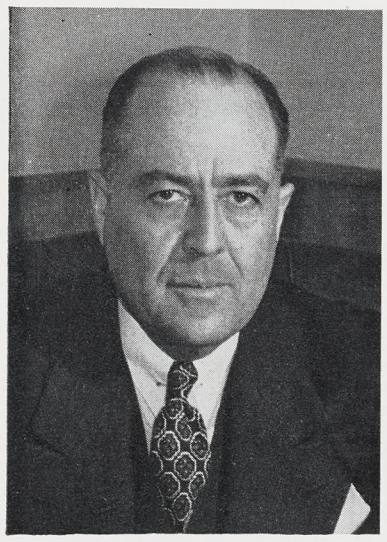
J. L. McKINLEY, Managing Director
H. W. HARTLEY, Assistant Director

PLANT ENGINEERING DIVISION

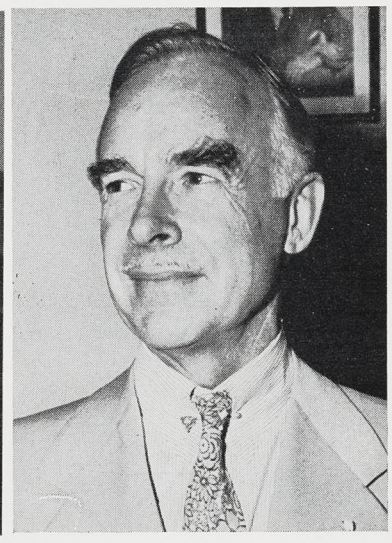
G. E. MUSK, Plant Engineer
M. L. CALKINS, Coordinator
CARL RAKER, Superintendent of Maintenance

The most important ingredient in the continued success of Northrop Aircraft has been the loyal effort and sincere understanding of company personnel. During our first ten years of operation, the material contributions made have mounted until the Company is now an extended reflection of the spirit of the men and women who make up the alive and human entity that personifies the corporation.

To name all those who have lent physical and moral support to the building of our Company would be impossible here since space forbids. They include, however, every loyal Norcrafter down through the years. The men and women who are listed here are only meant to be representatives of the American craftsmen and technicians who have worked at Northrop Field since those early days of Autumn 1939.



RICHARD W. MILLAR
Member of the Board of Directors



WILLIAM C. McDUFFIE
Member of the Board of Directors

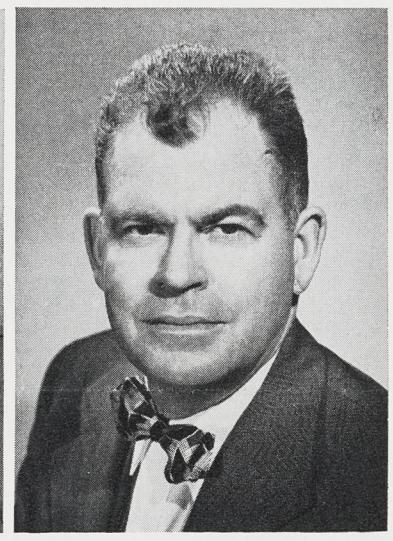
JOHN O'MELVENY
Member of the Board of Directors

EDWIN PEDERSON
Member of the Board of Directors

WILLIAM E. WILLETT
Member of the Board of Directors

A. C. MORGAN
Assistant Secretary
Assistant Director of Sales

S. W. TOWLE, JR.
Assistant Secretary
Washington Representative



RUDOLPH FINK
Assistant Secretary
Dayton Representative

PLANT SECURITY AND PLANT PROTECTION DIVISION

E. F. BURKE, Director

PUBLIC RELATIONS DIVISION

A. V. CLINE, Director

SALES DIVISION

J. W. MYERS, Vice-President and Director of Sales, Flight Operations
J. G. NETTLETON, Executive Assistant
REX HARDY, Executive Assistant and Airport Administrator
A. C. MORGAN, Assistant Secretary, Assistant Director of Sales and Contract Administrator
R. R. NOLAN, Director of Service
D. L. VIVRETTE, Assistant Contract Administrator and Customer Service

THE TURBODYNE CORPORATION

T. H. QUAYLE, President and General Manager
J. E. OLIVER, Assistant Secretary and Assistant Treasurer, Materiel Division
A. V. FINN, Chief Inspector
A. J. PHELAN, Vice-President and Chief Engineer
G. V. G. MYERS, Manager, Sunnyvale Division

AIR FORCE REPRESENTATIVES

COLONEL B. J. SAUNDERS, JR., Officer in Charge
CAPTAIN W. E. WOCKENFUSS, Assistant AF Officer in Charge
T. F. CROGHAN, Chief, Contract Branch
I. H. OWEN, Chief, Inspection Branch
H. D. TOWNSEND, Chief, Production Branch
G. C. RIDER, Air Force Civilian Property Agent
L. R. KING, Chief, Administrative Branch
C. R. GRAYLESS, Resident Auditor

RECORDS OF MERIT

ENGINEERING—1940. Brought on by Battle of London necessity—from Black Widow preliminary sketches to first shop drawing releases—time elapsed—102 days.

PRODUCTION—1942. British Government compliments Northrop Aircraft for initial V-72 Vengeance dive bomber delivery six weeks ahead of schedule.

PERSONNEL—1942. Treasury Department awards Minute Man flag for 90% payroll deduction bond buying participation.

PRODUCTION—1943. Don Mullet, Flight Department, receives War Production Board's Citation of Merit for Black Widow production suggestion.

ENGINEERING - PRODUCTION—1944. First American guided missile—ninety-one days from order through design and first flight.

PRODUCTION—1944. General H. H. Arnold praises Norcrafter F-61 production—pays high compliment to Widow fighting ability.

NORTHROP RECREATION CLUB—1945. Helms Athletic Foundation Award presented "In recognition of noteworthy contributions to sports and direction of projects and activities of exceptional merit—."

ENGINEERING - PRODUCTION—1945. Army - Navy "E" Flag awarded.

ENGINEERING—1947. John K. Northrop awarded "Spirit of St. Louis" ASME medal for Flying Wing design and development.

TRANSPORTATION—1947. Northrop drivers win sweepstakes in Los Angeles fleet safety contest—"Courtesy Equals Safety."

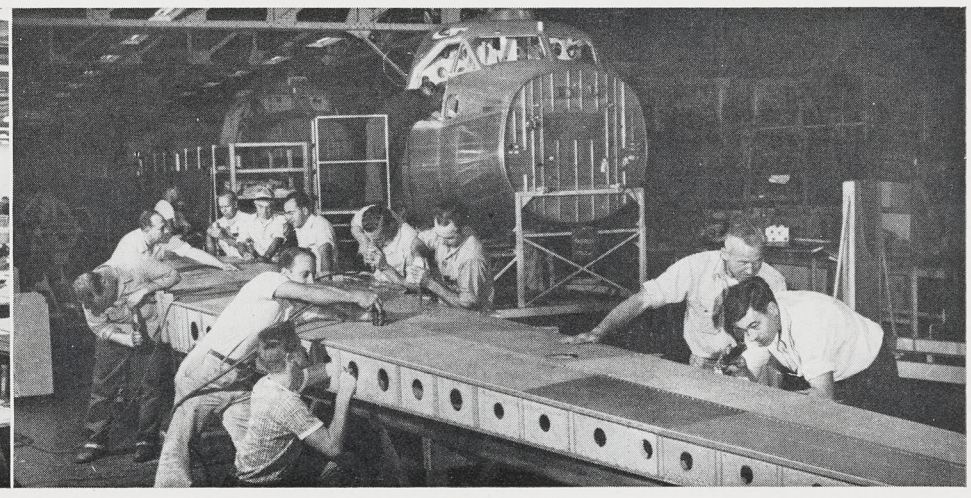
NORTHROP NEWS—1948. The "News" took highest editorial honors—seven first place awards—Industrial newspaper competition.

SAFETY—1848. Department of Labor Secretary Schwellenbach commends Northrop on high safe work record.

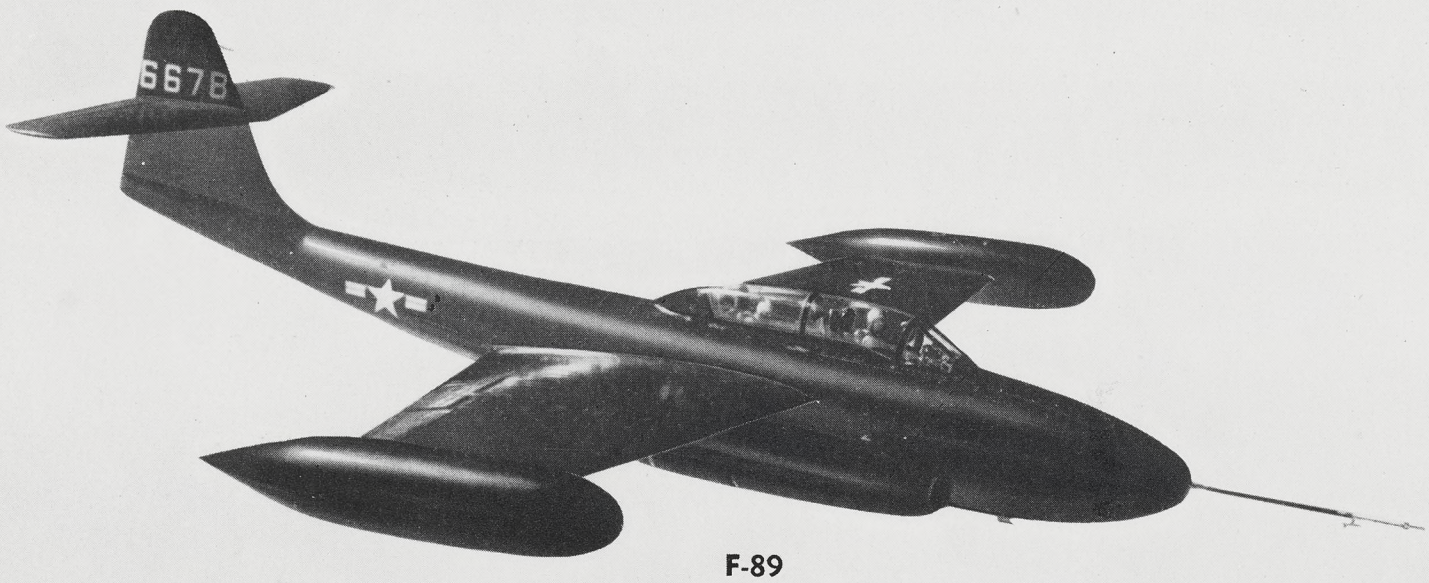
DEVELOPMENT—1948. Northrop Prosthesis "test pilots" Charles McGonegal, Gordon Warner, Jerry Leavy, and Lonnie Carberry receive service citations from Department of the Army.

TURBODYNE—1948. Turbodyne engine pulls more than twice the horsepower ever produced by any other known aircraft engine in the world—including jets.

DEVELOPMENT—1949. John K. Northrop awarded US President's Certificate of Merit for the development and perfection of the Flying Wing airplane.



ENGINEERING—. Here, Crenshaw Plant, the aircraft are designed and PRODUCTION—! Northrop production team—experience, "know-how" developed. Design talent and genius from entire world are attracted to pride of workmanship—builds second-to-none aircraft. Above the boys in Flying Wing builders at Northrop Field. Main drafting room is shown. Department 18 apply rivet gun, bucking bar to C-125 horizontal stabilizer.



F-89

1948 Scorpion—new Air Force all-weather fighter—for speeds in 600 mph range. Now in production —

Achieve

IN AIRCRAFT AT

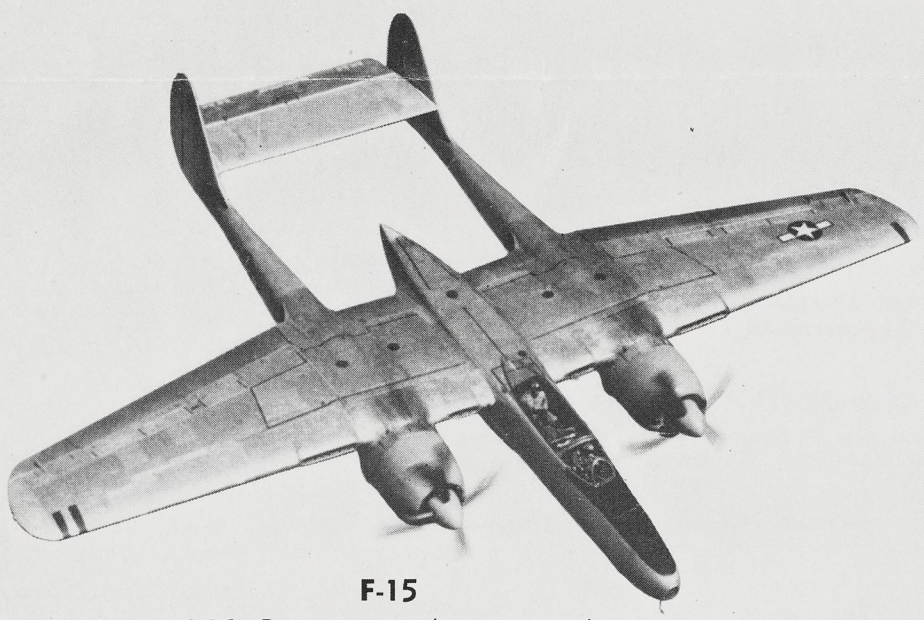
1939

N3-PB

1940 Norwegian patrol bomber—fought from Iceland. Had excellent combat record.

YB-49

1947 Northrop 8-jet bomber. the world's largest land planes Washington non-stop at 511 m also set record, unrefueled jet

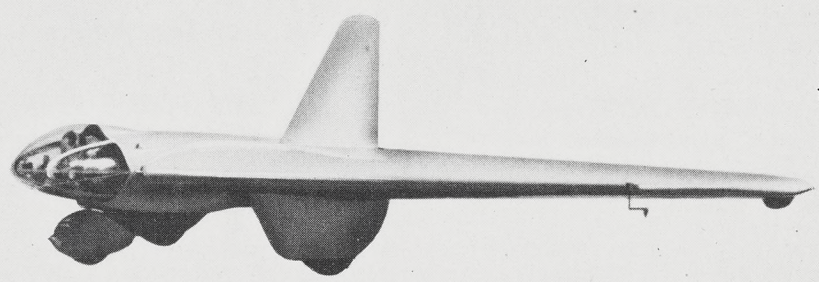


F-15

1946 Reporter — photo-reconnaissance version of Black Widow design. 4000 mile range—speed above 440.

XF-56

1943 Tailless all fighter — dual rotatio

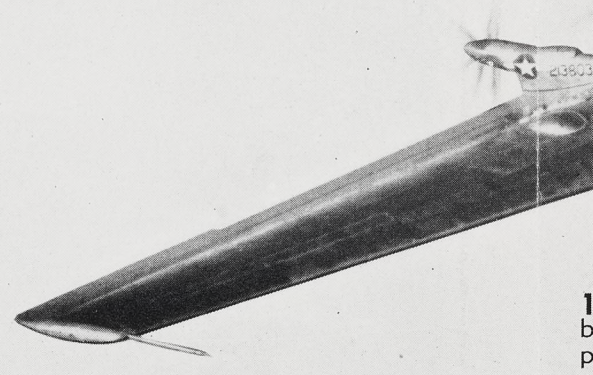


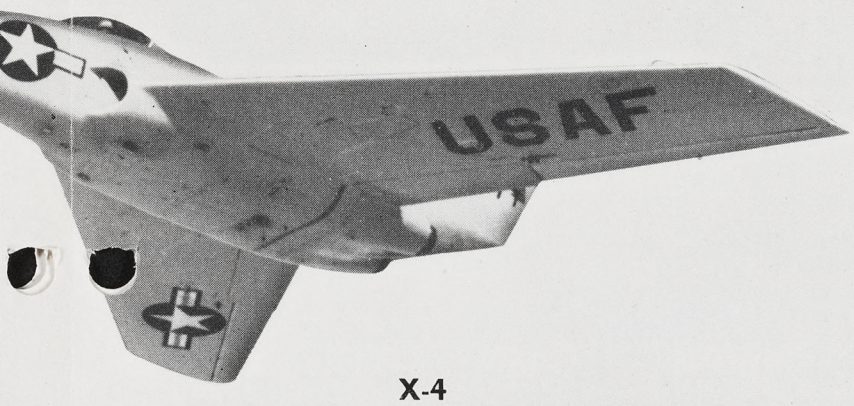
MX-324

1944 Northrop Rocket Wing — America's first military rocket plane. Pioneered prone cockpit, rocket power.

C-125

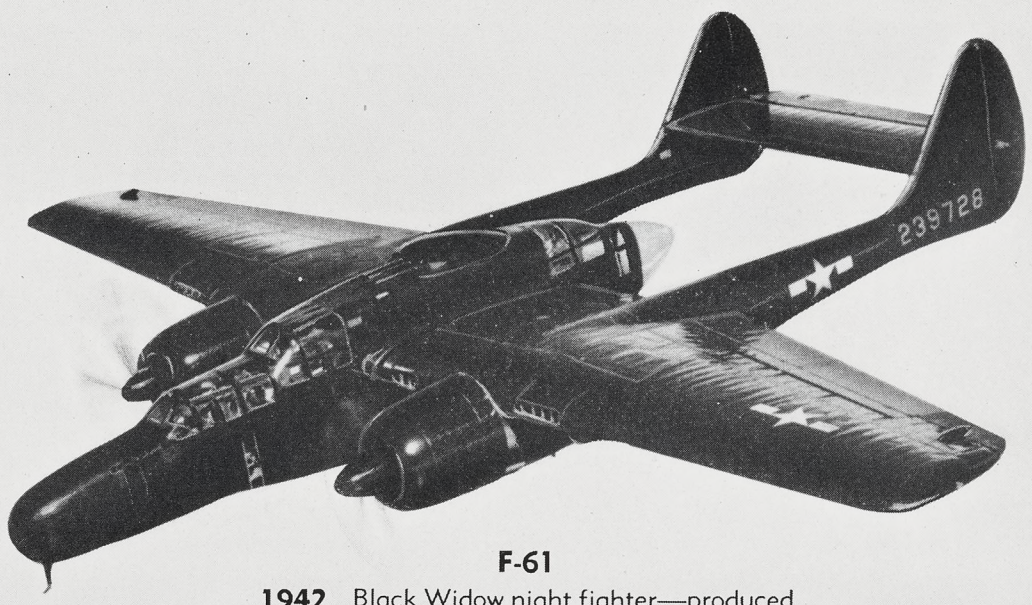
1949 Raider—rugged three-engine Air Force transport. It is being built on military order.





X-4

1948 Sonic speedster — Air Force NACA high-speed research plane—now under test.



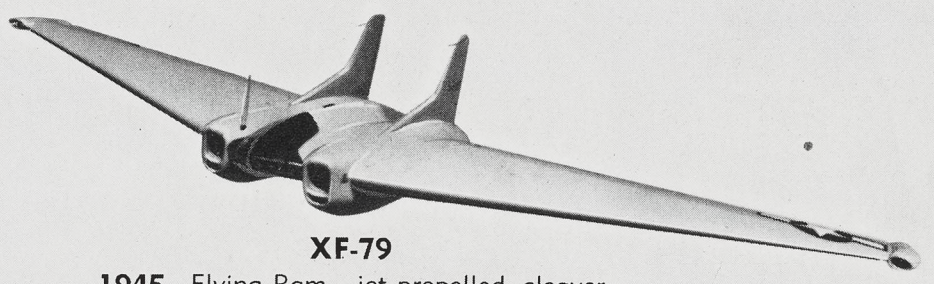
F-61

1942 Black Widow night fighter—produced for World War II. Saw action on both fronts.

...vements ..

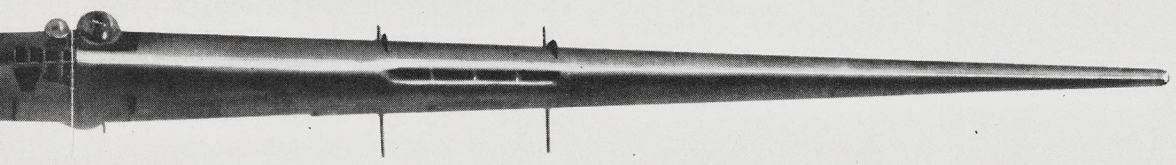
T AT NORTHROP FIELD

1949



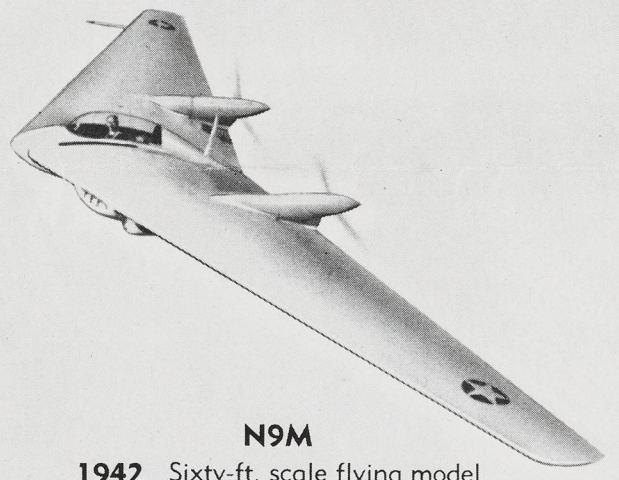
XF-79

1945 Flying Ram—jet propelled, cleaver wings. Among first to use prone cockpit.



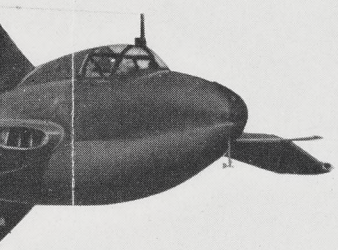
YB-49

jet bomber. This aircraft, among and planes, flew from Muroc to p at 511 miles an hour average; refueled jet endurance flight—.



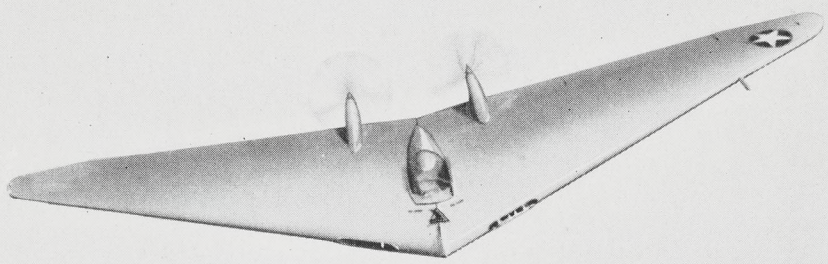
N9M

1942 Sixty-ft. scale flying model of giant Wing bombers. Four were built, flown hundreds of hours—.



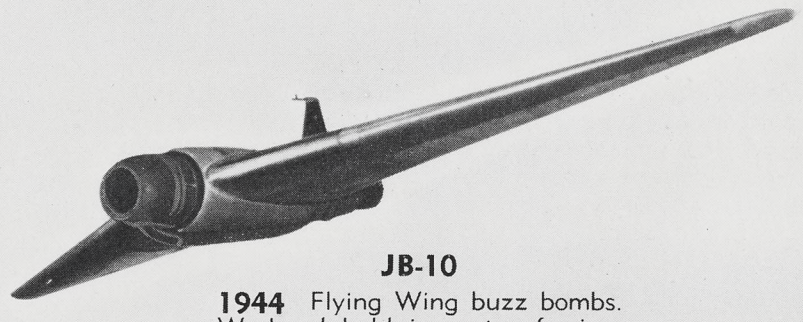
XF-56

lless all-magnesium dual rotation propellers.



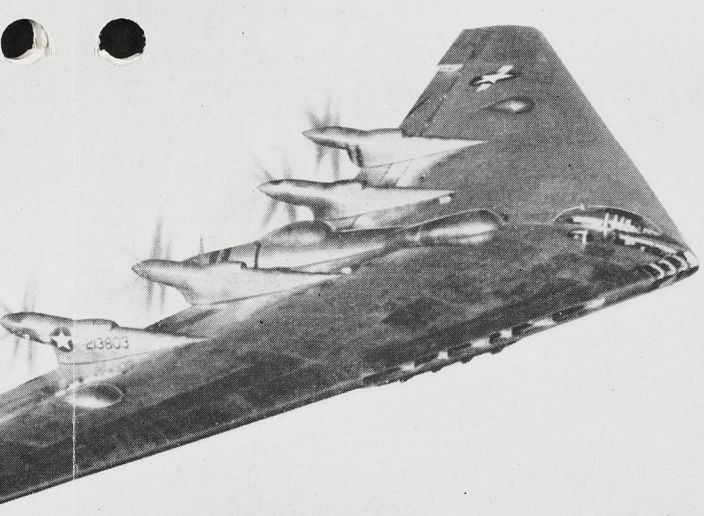
N1M

1940 First successful all-wing airplane housing pilot, engines, and landing gear inside the wing.



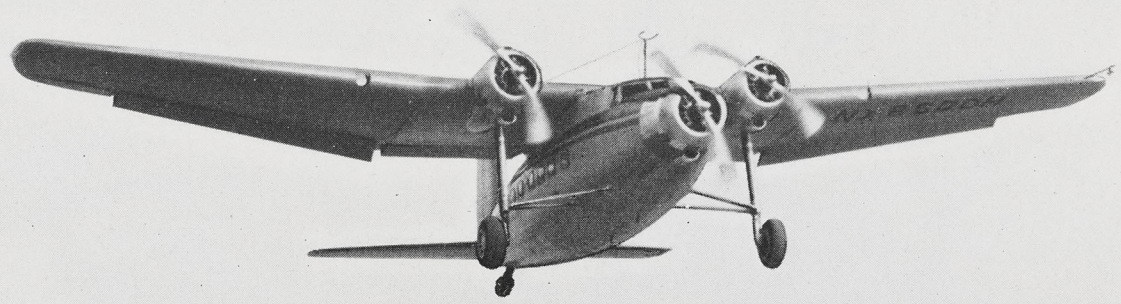
JB-10

1944 Flying Wing buzz bombs. Warhead held in roots of wing.



B-35

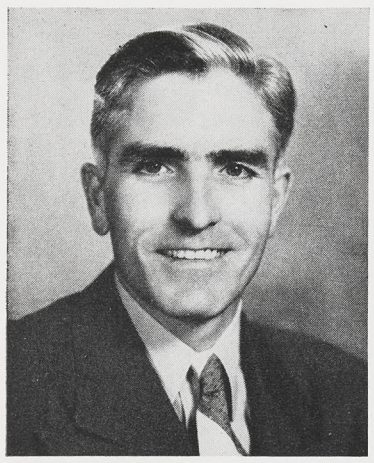
1946 First of the giant Flying Wing bombers — originally piston engine powered, being converted to jet power.



N-23

1946 Pioneer, three-engine transport for commercial use in areas with poorly developed airports —.

The Turbodyne Corporation



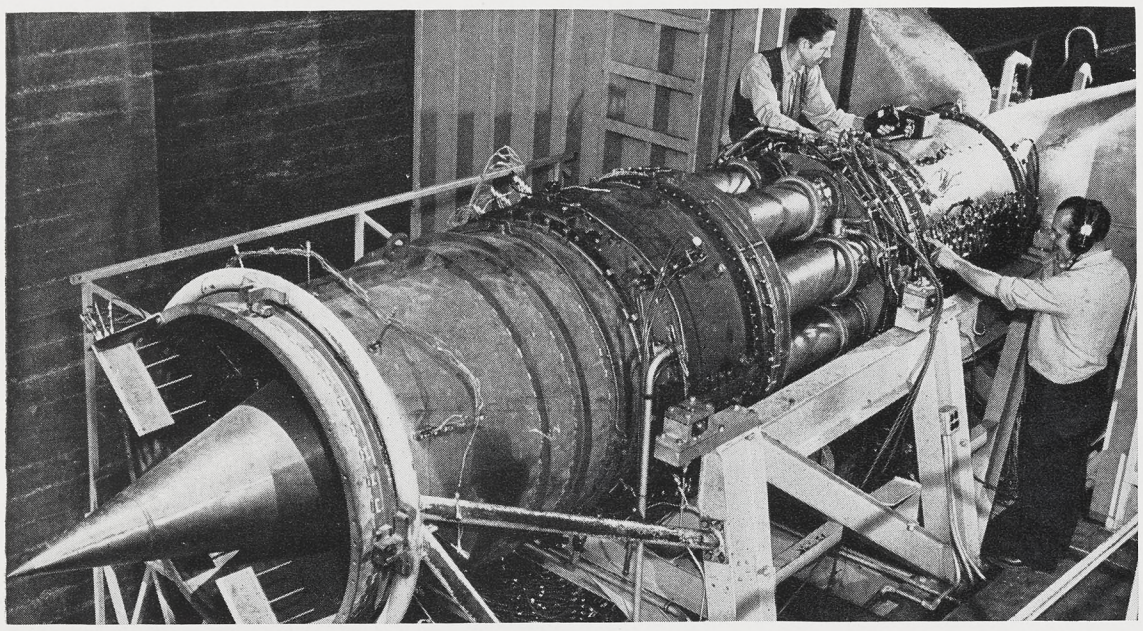
THOMAS H. QUAYLE
President

The Turbodyne Corporation is a wholly owned subsidiary of Northrop Aircraft but is operated independently of the parent Company. A builder of gas turbine engines for aircraft, marine, rail, and industrial uses, its shops, laboratory, and final assembly departments are located at Northrop Field, adjacent to the Crenshaw Plant. Heavy machine and fabrication work is done at Turbodyne facilities in Sunnyvale, California.

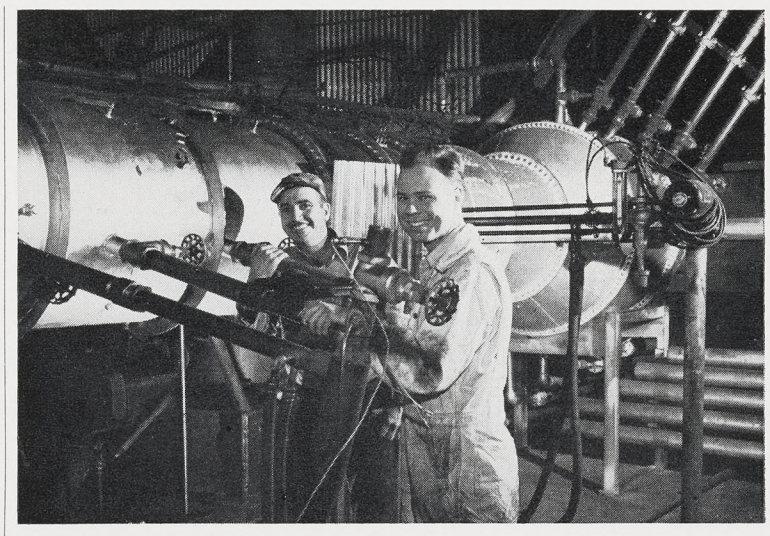
Historic date for the Company is March 10, 1945, when first Turbodyne ran successfully under its own power. The Company is now preparing a new and recently proved high horse power engine for Flying Wing test-bed test, with flight due late this year.

Great benefits in range and speed are predicted for airplanes equipped with these new engines. Similar to but more powerful than a turbojet, the Turbodyne produces shaft horse power as well as thrust.

The Turbodyne Corporation, as contractor to the Locomotive Development Committee, has also engaged in extensive research to determine and prove the feasibility of utilizing finely powdered coal dust for turbine engine power in place of liquid fuels.



TEN THOUSAND HORSEPOWER PLUS—! Above, Turbodyne men, Harry Williams (left) and Joe Dutt, prepare mighty airpower giant for trial run. Similar to jet engines in operation, the Turbodynes deliver power to a shaft with additional pounds of jet thrust obtainable. Pointed tip shown is the tail cone; front of engine is at the right.



TURBODYNE COAL BURNER—. TTC test men are Phil Soares and Garland Taylor. Coal dust for turbine fuel research was carried out on contract with the Locomotive Development Committee. Eastern railroads schedule rail test of Turbodyne developed combustor with Allis-Chalmers Houdry process turbine engine early this next year.

METALLURGY—. Turbodyne metallurgist Becky Sparling reviews performance of various alloys used for turbine blade construction. Blades, finely machined air-foils, are heart of Turbodyne power, must withstand high temperatures.

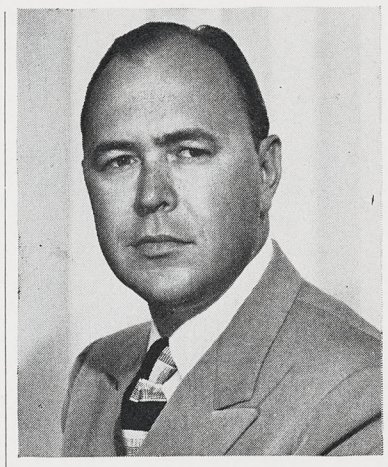
Northrop Aeronautical Institute

One of the milestones in the progress of Northrop Aircraft, Inc., is our own Northrop Aeronautical Institute founded by members of management, who, more than a decade ago, envisioned the need for a fine technical school to contribute to the science of aviation.

Headed by Mr. James L. McKinley, a small staff of training experts with whom Mr. Northrop had been previously associated, formed the Company early in 1942.

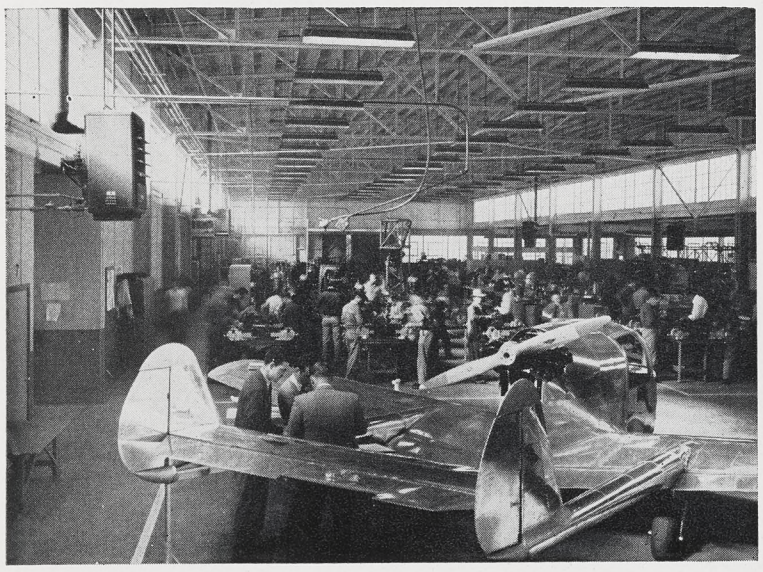
Today the Northrop Aeronautical Institute possesses five superbly equipped ultra modern school buildings and is freely acknowledged to be one of the largest and most active aircraft technical schools in the land. Its engineering curriculum is accredited by the eight largest engineering societies in America; its mechanic curriculum is approved by the U. S. Civil Aeronautics Administration and, in further recognition, the school is approved by State of California Board of Education, the U. S. Veterans Administration, and the U. S. Department of Justice for the entrance of foreign citizens.

Graduates of the Northrop Aeronautical Institute are pursuing successful careers on the airlines, in aircraft plants and repair stations everywhere.



JAMES L. McKINLEY
Director

GRADUATE PLACEMENT—. Symbolic of varied opportunities afforded through the Institute Placement Service, these graduates gain jobs with Los Angeles Airways, Helicopter—Southland air mail. One of NAI subjects is study of 'copters. Students above check Flight Line repair.



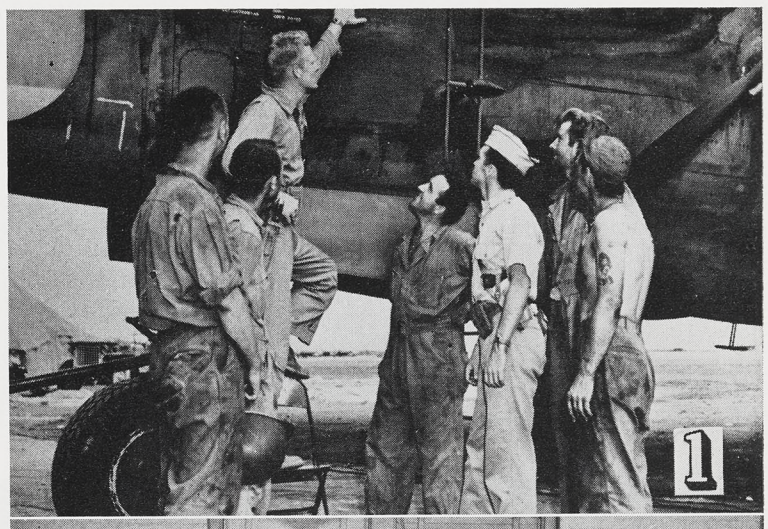
STUDENT ACTIVITY is shown in this portion of an Institute shop building. In foreground is mock-up of airplane design project currently being completed by Aeronautical Engineering students as part of their aircraft studies.

AIVIATION TRAINING CENTER—aerial photo offers an over-all glimpse of attractive buildings and grounds of Northrop Aeronautical Institute. School, located in midst of mile-long Northrop Aircraft property, provides training in true aviation environment and operates under high approvals. Courses are A & E Mechanics, Aeronautical Engineering.

Northrop Scene

1939 - 1949

(1) NORTHROP BLACK WIDOW in first Asiatic air victory. Pilot Lieutenant Haberman installs Rising Sun decal. (2) NORTHROP FOREMEN'S CLUB yearly gavel exchange—. Outgoing 1948 president, Max Fayrweather, seated left, passes gavel to 1949 president, Jack Hebard, right. (3) NORTHROP HOSPITAL—one of the most modern in industry. Nurses Lorna Neels, Elise Williams—in charge, Elise Johnston, and Ardythe Voogd in case history conference. (4) T-FLAG was awarded Northrop Aircraft for over 90% payroll War Bond deduction participation achievement. Movie star Loretta Young headlines presentation ceremonies — 1942. (5) PRODUCTION PUSH—. Lynwood warehouse helps make way for F-89 production. Occupied July, 1949. (6) PRODUCTION AWARD REWARD—. John B. Clark (center), Industrial Relations director, presents Frank Rosenstiel with $159.50 check for pattern suggestion. Superintendent Clarence Drury, right—1948. (7) "GLAD TO BE HERE—." Captain Eddie Rickenbacker, recovered from South Pacific raft voyage, gives production fight talk to 8000 Norcrafters—1943. (8) COURTESY EQUALS SAFETY—. Northrop drivers pose proudly, having won 1946-47 Fleet Safety Contest sweepstakes. (9) ARMY FIELD PIECE tries out Raider mockup accommodations—1948. (10) HAWTHORNE HOTEL, fall of 1939—. Engineers take photographer time out from Flying Wing and N-3PB preliminary designs. (11) "THE BATTLE GOES—." General of the Air Force "Hap" Arnold describes Widow fortunes in the E. T. O. to Jack Northrop on plant visit, October 25, 1944. (12) NORTHROP NEWS SWEEP—. Seven first-place awards for excellence won by the "News," 1948. Northrop Executive Vice-president Claude Monson, left, congratulates News' Editor Charles Bradford. (13) PRODUCTION EXPANSION, 1949—. Northrop garage takes up quarters on Prairie Avenue. F-89 and C-125 all-out production schedules dictate expansion.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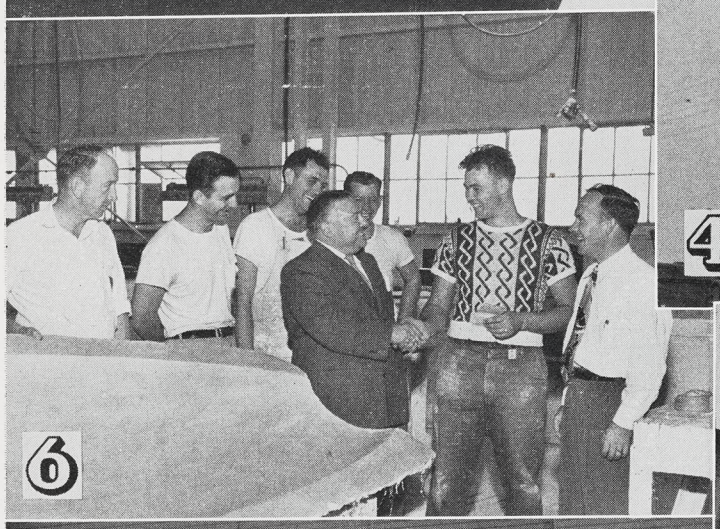
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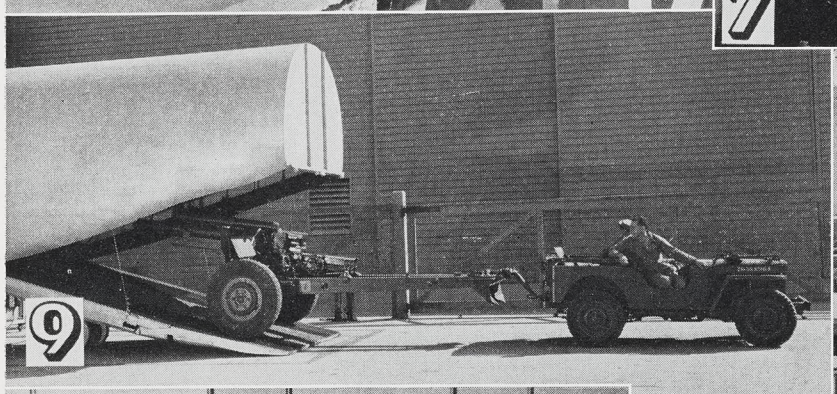
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Northrop News
Vol. 8 Northrop Field, Hawthorne, Calif. No. 10

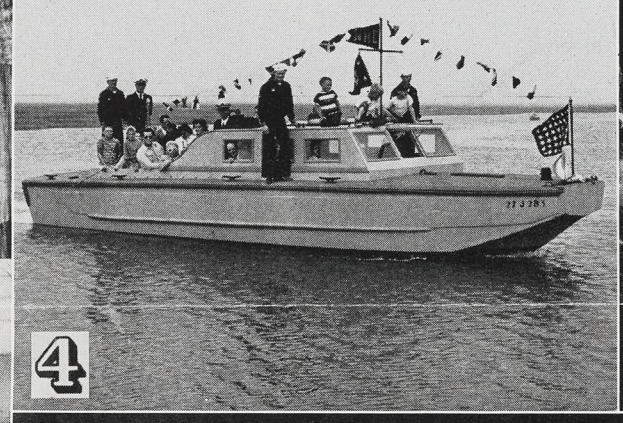
Published every other Wednesday by
INDUSTRIAL RELATIONS DIVISION, NORTHROP AIRCRAFT
JOHN B. CLARK, Director

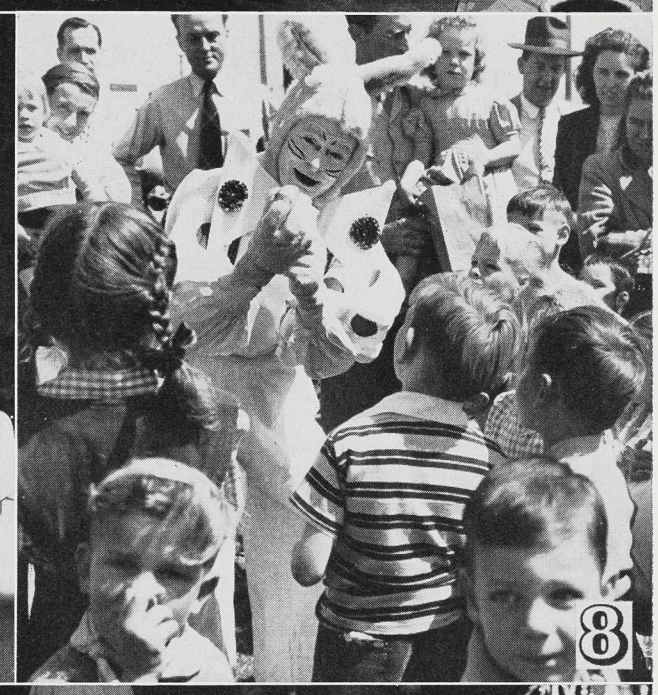
CHARLES BRADFORD, Editor

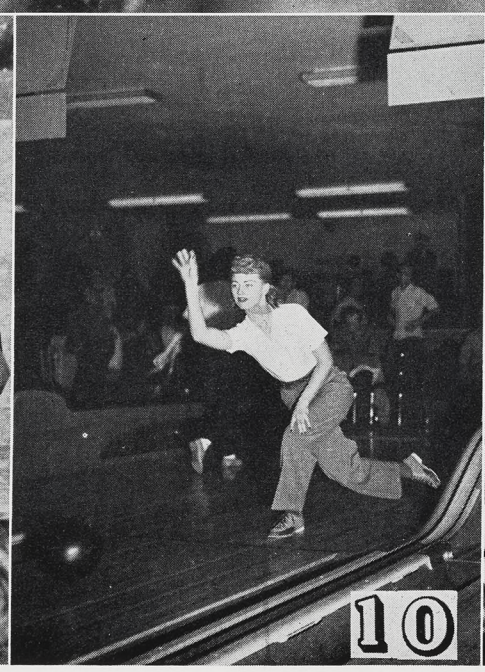
PUBLICATION COMMITTEE, SOUVENIR ISSUE
AL CLINE, Director, Public Relations—*Advisor*
RAY GASKELL, Assistant Engineering Manager—*Historian*
HAROLD PERSHING, BOB JOHNSON, AND PAUL TRAMZ, of the Illustration Department—*Art Work*
Northrop Photo Lab—*Photography*

Northrop Recreation Club Steps Out . . . ! !

(1) CONFRONTED WITH NORTHROP JUNIOR PICNIC PRIZE to be, young Jack Jones is properly flabergasted while dad, Jack Jones, white tee shirt with camera, vows to do something about it. NRC folk—Basey, Doubleday, Keep, and McCue form part of picnic committee. September, 1944. (2) NORTHROP BOND PURCHASES buy two Black Widows, "Hades Lady" and "First Nighter"—1944. (3) NRC WING DINGS—fund-raising production for Hawthorne Park—Leuzinger High School, fall of 1947. Winter Queen Jeannette Nawoj (center) is escorted by Norcrafter baritone Bob Carlson. (4) NORTHROP SPONSORED SEA SCOUT SHIP "SEAGULL" dressed for visitors—1948. (5) SKI CLUB—. June Lake rendezvous, 1946. (6) NRC ART SHOW—Paul Nelson, center left, with glasses, ponders the "where" and "how" of display—1947. (7) THE MARDI GRAS—. Gary Cooper crowns Northrop queen and ladies-in-waiting—August, 1944. (8) NRC EASTER PARTY, 1948—. Bunny rabbit enchants Northrop Juniors. (9) NORTHROP JUNIORS, BOY SCOUTS, ET AL gather around Personnel Activities Manager Charles Boyle on day of Saturday fun and games at NRC Field—1947. (10) NRC BOWLING CLUB—. Betty Schmidt, Inspection, winter tournament, 1949. (11) "SANTA CLAUSE PLEASE BRING ME—." Leuzinger High School, 1948.





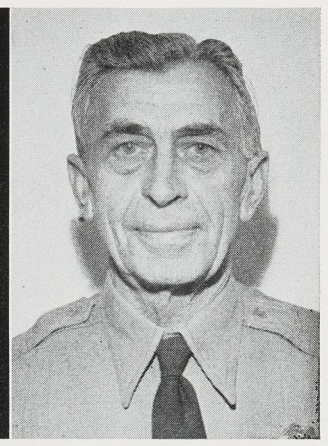


Ten-Year Norcrafters

JOHN K. NORTHROP
Founder, March 7, 1939

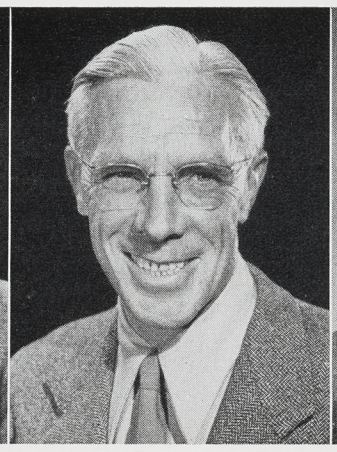
B. G. REED
August 1, 1939

MARGARET BATEMAN
August 7, 1939



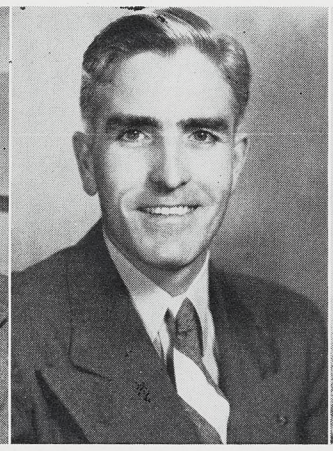
HAL L. JACOBS
August 13, 1939

KATHRYN YOUNG
August 14, 1939



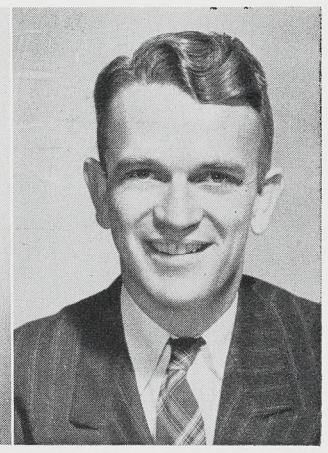
TOM CHITTENDEN
August 20, 1939

WALTER J. CERNY
August 21, 1939



THOMAS H. QUAYLE
August 21, 1939

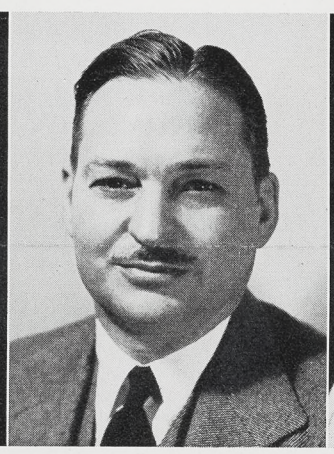
RAY W. GASKELL
August 21, 1939



RICHARD R. NOLAN
August 28, 1939

WARREN G. KNIERIEM
September 5, 1939

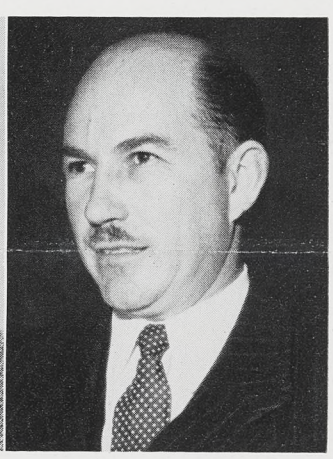
ROBERT L. EHINGER
September 5, 1939



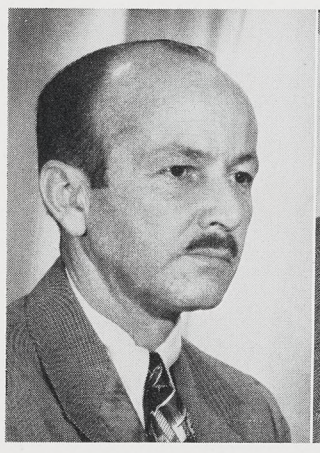
GLEN M. ARON
September 25, 1939

WALTER T. GAGE
October 2, 1939

ROBERT S. CATLIN
October 2, 1939

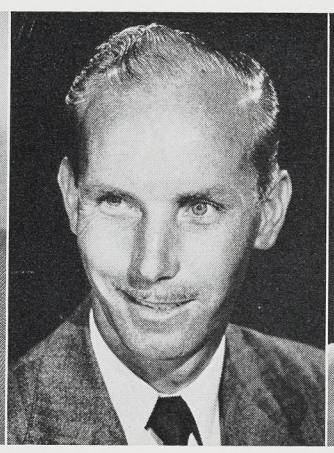


C. N. MONSON
October 9, 1939



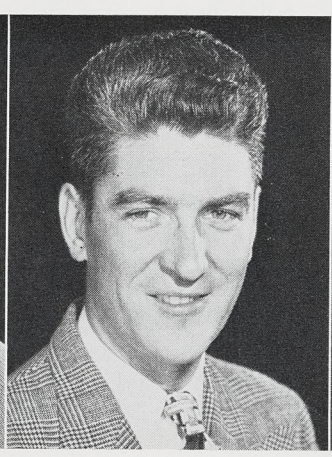
DOUGLAS G. LELAND
October 16, 1939

C. B. SPENCER
October 23, 1939

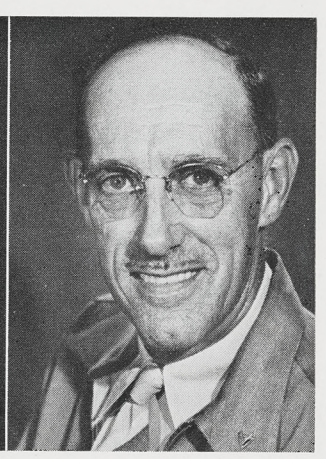


C. PAUL BONHAM
November 16, 1939

CLURMAN W. BIBB
November 20, 1939



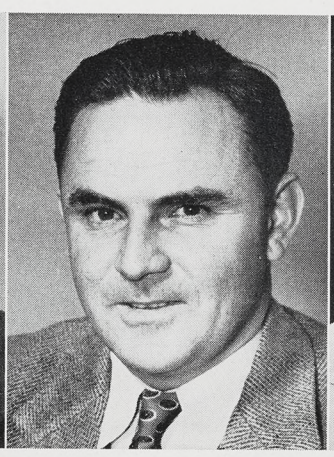
JOHN J. PFARR
November 20, 1939



HERMAN C. RAKER
November 20, 1939

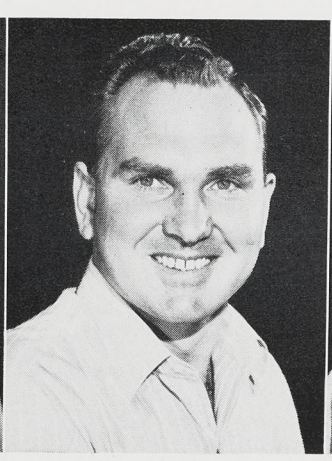
ROY W. LINDSTROM
November 21, 1939

FRED J. BAUM
November 21, 1939



THOMAS E. PIPER
December 4, 1939

MELVIN N. BROWN
December 18, 1939



WILL L. RICE
December 21, 1939

GEORGE A. NEWELL
December 26, 1939

TEN YEARS OF PROGRESS
33 55
NORTHROP